

REMARKS

Claims 1-7 are pending in the application.

I. THE SPECIFICATION OBJECTION

The examiner objected to the specification for failing to include antecedent basis for allegedly failing to describe the “seal adapted to seal against the periphery of the user’s face when worn”. The examiner’s objection is traversed because the term is well supported by the specification.

The claim feature of “a seal adapted to seal against the periphery of the user’s face when worn” in claim 1 is more than adequately supported by the specification. The seal (12) referenced by the Examiner on page 4, lines 19-22 of applicant’s specification is not the seal adapted to seal against the user’s face. Instead, it is a completely different seal provided to prevent leakage between the face plate 7 and ring 4 in Figure 4. The seal adapted to seal against the user’s face recited in claim 1, however, is element (6) in that Figure (and in figures 1 and 3). The specification has many antecedents for seal (6) both generally and with specific reference to the illustrated embodiment as shown by the passages quoted below (emphasis added):

“a first sub-assembly adapted to be worn on the head and including *sealing means adapted to form a seal around the periphery of the user’s face when worn*”. (page 2, lines 12-14)

“the first sub-assembly can be donned at the outset and the necessary time taken to ensure that *its sealing means is adequately sealed against the user’s face*” (page 2, lines 21-23)

“*the face seal* providing substantially better comfort” (page 2, lines 25-26)

“from which *said sealing means extend to engage around the periphery of the user’s face*” (page 3, lines 3-4)

“a profiled elastomeric gasket 6 which extends into sealing engagement around the periphery... of the user’s face” (page 4, lines 2-4)

“*the gasket 6 is properly and comfortably sealed against his face*” (page 4, lines 7-8)

“The integrity of *the peripheral face seal formed by the gasket 6*” (page 4, lines 26-27)

“without compromising the integrity of *the face seal*” (page 4, lines 29-30)

“By virtue of *the face seal formed by gasket 6*” (page 5, line 10)

“by making *the gasket 6* part of the sub-assembly 1... the integrity of *the face seal*” (page 5, lines 14-15)

The term “gasket” appearing in some of the passages is a species of “seal”, as is apparent both from the passages themselves and from any dictionary definition of the term, such as the one at <http://www.merriam-webster.com/dictionary/gasket>.

It is abundantly clear based upon the excerpts above that the specification includes adequate support for seal (6) – the seal adapted to seal against the periphery of the user’s face. The examiner’s objection to the specification on this ground should, therefore, be withdrawn.

II. THE OBVIOUSNESS REJECTION MUST BE WITHDRAWN BECAUSE THE BASIS FOR COMBINING THE REFERENCES MISINTERPRETS TISCHER

The examiner finally rejected all pending claims 1-7 for obviousness over Quilter et al. (Quilter) (USP 2,861,568) in view of Tischer et al. (Tischer) (USP 6,328,031). The examiner’s rejection is traversed on grounds that the examiner’s motivation for combining the references is technically faulty and because the references are from very different fields of endeavor and one of ordinary skill in the art would not have considered combining the references as the time of the invention.

A. The Examiner’s Motivation For Combining References Is Technically Flawed

The Applicant took the position in its February 26, 2008 Office Action Reply that claims 1-7 are non-obvious and patentable because the examiner’s motivation for combining the references is faulty. The examiner rebutted Applicant’s position in the Final Rejection by arguing (1) that the test for combining references is what the combined teachings of the references would have suggested to one of ordinary skill in the art at; and (2) that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Quilter device in order to make the subassemblies separable for the purpose of preventing direct exposure of the wearer’s head to a high heat environment as taught by Tischer et al. The

obviousness rejection continues to be without merit because the examiner's grounds for combining the various elements of the prior art reference is based upon a misinterpretation of the cited Tischer et al. teaching.

The examiner cites to column 2, lines 35-40 of Tischer et al. for suggesting a reason (and the only reason cited by the examiner) why one of ordinary skill in the art at the time of the invention would have combined the teachings of Quilter and Tischer et al. to reach the claimed invention, i.e., to make the subassemblies separable for the purposes of preventing direct exposure of the wearer's head to high heat environment "as taught by Tischer". However, the cited portion of Tischer et al. suggests no such thing. Instead, what the cited passage of Tischer et al. actually says is:

"The hood is detachably connected [to the] face mask so as to secure the annular edge of the hood in the annular recess of the face mask and thereby prevent direct exposure of the individual's head to the high heat environment associated with a firefighting site."

In other words the cited portion of Tischer et al. is a teaching that when the (detachable) hood and face mask are connected, the joint which is made between them (by the annular edge of the hood and the annular recess of the face mask) must be such as to prevent direct exposure of the individual's head to the high heat environment (i.e. must leave no gaps through which the heat from outside may pass). The cited portion of Tischer et al. is not a teaching or suggestion – as the examiner believes - for making the sub-assemblies separable. It is instead a teaching that in use to protect the firefighter there must be a sealed connection between the sub-assemblies to exclude the hot environment. In Quilter the respective parts are already permanently sealed together during manufacture e.g. by vulcanisation (column 2, lines 63-67 of Quilter et al). So the cited teaching of Tischer et al. would suggest that the Quilter et al. helmet should not be modified at all because it is already sealed. The examiner's obviousness rejection cannot be sustained for this reason and claims 1-7 must be allowed.

B. The References Teach Away From Their Combination

The Applicant renews the position that claims 1-7 are non-obvious and patentable because one of ordinary skill in the art would not have combined the references as the examiner has. Indeed, the references teach away from their combination. The examiner takes the position that Quilter discloses a first sub-assembly (the outer skin or cover 15) and a second sub-assembly (the window 26 and mouthpiece or breathing mask 64, which are both comprised

in the frontal mask 25). The examiner does not identify why these particular elements of the overall helmet structure are to be regarded as individual sub-assemblies although this is assumed to be based on column 2, lines 64-67 of the reference where it is stated that “the molded mask 25 and the sheet-rubber cover 15 may be formed separately and joined together by vulcanization or otherwise, as the judgement of the manufacturer may dictate”.

The Examiner correctly recognises that Quilter fails to disclose that the mask 25 is separable from but selectively co-operable with the cover 15 as required for the two sub-assemblies in claim 1 of the application. It is also correct that Tischer discloses a structure in which a hood and face mask are detachably connected to each other. It does not however follow, as alleged by the Examiner, that it would be obvious to one of ordinary skill in the art to modify the helmet of Quilter to make the two identified subassemblies separable and electively co-operable as claimed.

In this respect one of ordinary skill in the art would not combine the references in the manner suggested, or at all to reach the claimed invention. Indeed, the purposes of the Tischer and Quilter devices are quite different. It is an aim of Tischer to provide a fire fighting hood and face mask assembly which simplifies and speeds the donning of the hood and mask and which reduces the risk of injury to the firefighter while permitting the hood to be quickly and easily detached from the face mask to facilitate cleaning and/or replacement of the hood (Tischer et al column 2, lines 6-12). Moreover a high heat environment is not a concern at all of Quilter. Instead Quilter seeks to provide an improved oxygen-fed pressurized helmet for aviators at high altitudes, which is constructed mainly of flexible material but dispenses with a compensatory or “pressure-drop” valve, and prevents the accumulation of carbon dioxide in the interior of the helmet (Quilter et al column 1, lines 53-61). It is not the intention of Quilter that the helmet should ever be worn without the frontal mask 25, and indeed while Quilter discloses that the mask 25 and cover 15 may be formed separately, the reference explicitly requires the components to be permanently joined, as by vulcanization. It would therefore be entirely contrary to the teaching of Quilter (1) to modify the structure to make these components separable; and (2) to modify the structure in any way due to high heat environment concerns. Hence claims 1-7 are not obvious and patentable because a skilled person at the time of the invention would not have combined the references as the examiner has.

CONCLUSION

Claims 1-7 are pending in the application and are believed to be patentable for at least the reasons identified above. Favorable consideration and allowance of all pending application claims is courteously solicited.

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